APPLIED MATHEMATICS AND COMPUTATION

VOLUME 21 1987

R. H. Rand and W. L. Keith
Determinacy of Degenerate Equilibria with Linear Part $x' = y$, $y' = 0$ Using MACYSMA 1

Jean-François Maître and François Musy
Multigrid Methods for Symmetric Variational Problems: A General Theory and Convergence Estimates for Usual Smoothers 21

Donald Greenspan
Note on a New Computer-Oriented Approach to Molecular Mechanics 45

Ambrose Goicoechea and Lucien Duckstein
Nonnormal Deterministic Equivalents and a Transformation in Stochastic Mathematical Programming 51

Nikitas Assmimakopoulos
A Medication Management System 73

Mohan K. Kadalbajoo and Y. N. Reddy
Numerical Treatment of Singularity Perturbed Two Point Boundary Value Problems 93

R. Shabahang
Mean Wave Solution: Bounded Medium—Discrete Scatterers 111

C. S. Hirtzel and K. Y. Chan
Computer Experiments for the Analysis of Extreme-Value Phenomena 125

E. G. Anastasselou
Analytical Solution of Polynomial Equations with an Application to the Quintic Equation 145

Javed Ahmed and Charles D. Bonham
Application of Geometric Programming to Optimum Allocation Problems in Multivariate Doubling Sampling 157

Beny Neta and Paul Nelson
An Adaptive Method for the Numerical Solution of Fredholm Integral Equations of the Second Kind. I. Regular Kernels 171

Mohan K. Kadalbajoo and Y. N. Reddy
Approximate Method for the Numerical Solution of Singular Perturbation Problems 185

Wei Shyy
An Adaptive Grid Method for Navier-Stokes Flow Computation 201

Mohan K. Kadalbajoo and Y. N. Reddy
Numerical Solution of Singular Perturbation Problems via Deviation Arguments 221

Peter R. Eiseman
The Geometric Construction of Pointwise Distributions on Curves 233

John D. Miller
Zeros of Maps of R^n into R^n 277

Michael A. Golberg
The Convergence of Several Algorithms for Solving Integral Equations with Finite Part Integrals. II 283

Z. U. A. Warsi
A Synopsis of Elliptic PDE Models for Grid Generation 295

K. Watanabe and D. M. Himmelblau
A Straightforward Way to Design Nonlinear Controllers for Nonlinear Processes by Means of Process Discretization 313